



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/125,128	08/11/1998	YUICHIRO IGUCHI	1084-98	7453
35811	7590	12/27/2005		
IP GROUP OF DLA PIPER RUDNICK GRAY CARY US LLP 1650 MARKET ST SUITE 4900 PHILADELPHIA, PA 19103				
			EXAMINER CLEVELAND, MICHAEL B	
			ART UNIT 1762	PAPER NUMBER

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/125,128

Applicant(s)

IGUCHI ET AL.

Examiner

Michael Cleveland

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 121-153 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 121-153 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1762

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 147-148 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is also no disclosure supporting the limitations of a “detector for detecting the bottom surface of the flat plate” nor “an adjuster to adjust an inclination degree of the bottom surface of the flat plate” in claims 147-148.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1762

5. Claims 121-123, 125-127, 129-134, 137, 141, 143, and 147-153 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto et al. (U.S. Patent 5,921,836, hereafter '836).

'836 teaches a method of and apparatus for forming a plasma display panel using a paste applicator with a plurality of nozzles (and therefore a plurality of holes) in a flat plate (See Figs. 16, 22) at the same time (See Figs. 20-22) to continuously deposit a phosphor paste including an organic binder to form a phosphor layer on a substrate with a plurality of barrier ribs (col. 4, lines 16-39) supported on a table (51) by moving the applicator and table relative to one another. The phosphors may be of three colors (red, green, and blue), applied as stripes, and dried (col. 1, line 58-col. 2, line 12). The dried films coat the substrate, anode, and sides of the barrier ribs. See, for instance, Fig. 1.

'836 suggests using a substrate with a hole diameter of 100 microns (col. 4, lines 36-39).

'836 does not explicitly teach an outlet hole pitch of 0.12 to 3 mm nor the use of 150-2000 outlet holes. However, it does teach that the outlet hole pitch is determined by the rib pitch (col. 11, lines 41-59). '836 suggests a spacing (S) between barrier ribs of 170 microns (col. 4, lines 36-39) and a rib width (W) of 50 microns (col. 8, lines 1-12), thereby suggesting a rib pitch ($P=S+W$) of 220 microns. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have use a hole pitch of about 220 microns (0.22 mm) as the particular hole pitch because '836 teaches that the hole pitch should be the same as the rib pitch. '836 explicitly teaches that there may be 5-30 nozzles (col. 4, lines 26-39). However, given that there are many stripes to be formed (see, e.g., col. 8, lines 1-2), it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used more nozzles in order to have decreased processing time. '836 that there may be 1920 grooves (col. 8, lines 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an applicator with up to 1920 holes in order to have coated the substrate in a single pass in order to have decreased processing time. Alternatively, for a multicolor device, there are up to 640 grooves of each color (col. 8, lines 9-12), suggesting the use of 640 nozzles at a pitch of 0.64 mm.

Claims 122, 125: '836 suggests using a substrate with a spacing S of 170 microns and D of 100 microns (col. 4, lines 36-39).

Claims 123: The hole pitch may be six times the barrier pitch (col. 11, lines 45-53).

Art Unit: 1762

Claim 125-126, 143: '836 suggests a hole diameter of 100 microns and spacing of 170 microns (col. 4, lines 30-34).

Claim 127: The clearance (distance between the nozzle tips and barrier top) should be kept constant. Typical values are 0.1-0.2 mm (col. 6, lines 3-13).

Claims 131-132: '836 does not explicitly teach Applicant's claimed ranges of the outlet hole pitch, phosphor paste compositions or viscosities, barrier rib characteristics, and spacing between stripes. The resolution is affected by variables such as the distance between stripes of different colors, barrier height, width, and pitch. The viscosity of the paste is affected by the composition of the paste (col. 4, lines 16-20, col. 7, line 66-col. 8, line 19). The outlet hole pitch is determined by the rib pitch (col. 11, lines 41-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized these characteristics for the desired resolution and paste thickness.

Claim 129: '836 does not explicitly teach Applicant's claimed order of application. The coating process begins outside of the region of effective display (col. 6, lines 35-41), apparently so that nonuniformities during the beginning of the deposition are not seen in the final product. By extension, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have continued movement beyond the effective region at the end of each stripe as well to prevent nonuniformities at the end of the process. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have begun moving the nozzle before deposition and stopped after deposition ceased in order to avoid nonuniformities in the effective region of the display panel.

Claim 130: The phosphor layers are dried with heat (col. 11, lines 10-13).

Claim 133: The top of the ribs may be colored black (col. 5, line 59-col. 6, line 2).

Claims 134 and 137: Multiple applicators may be provided to apply the phosphors in series (Fig. 13).

Claim 147: The apparatus may have means to detect the position of the tips of the outlet holes, which may be flush with the flat plate (Figs. 20-22) and the tops of the barrier ribs (col. 6, lines 3-20) and controlling the area of application (col. 6, lines 3-50).

Art Unit: 1762

Claim 148: The distance between the ribs and nozzle tips is kept constant (col. 6, lines 3-14). The apparatus has means to adjust the inclination degree of the applicator nozzles (col. 12, lines 40-49).

Claim 149: The apparatus has means to detect the position of the phosphor paste (col. 7, lines 24-32).

Claim 150-153: The apparatus comprises means to recognize alignment marks that determine the positions of the ribs and grooves (i.e., spaces) so that the phosphor may be deposited in the grooves (col. 5, line 48-col. 6, line 2).

6. Claims 124 and 142 are rejected under 35 U.S.C. 103(a) as being unpatentable over '836 as applied to claims 121 and 141 above, and further in view of Ravi-Chandar et al. (U.S. Patent 5,656,574, hereafter '574).

'836 does not describe the use of outlet holes with a length/diameter ratio of 0.1-600. The Examiner takes official notice that the length to diameter ratio of a nozzle for dispensing pastes is known to affect the rheological properties and therefore the dispensing efficiency of the nozzle. See, for instance, the extrusion process described in '574, col. 6, lines 40-49. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the length-to-diameter ratio of the paste applicator of '836 for the optimum rheological properties.

7. Claims 128 and 146 are rejected under 35 U.S.C. 103(a) as being unpatentable over '836 as applied to claims 121 and 141 and further in view of Mettenbrink (U.S. Patent 4,775,080, hereafter '080).

'836 is described above. '836 also teaches that the apparatus comprises pressure adjusting and controlling means to dispense the paste (col. 7, lines 48-54). '836 does not teach that the pressure may be designed to be negative. However, clogging of the nozzle is taught as disadvantageous (col. 9, lines 59-62). It is well known to prevent the formation of dried beads of material that clog nozzles by applying a vacuum to the nozzle when the dispensing stops. As an example, '080 teaches the operation of a toothpaste dispenser, in which a vacuum is formed in the nozzle that avoids the formation of a plug of hardened paste outside the nozzle (col. 8, lines

Art Unit: 1762

33-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have allowed the adjusting means of '836 to apply a negative pressure to draw undispensed material back into the nozzle at the end of dispensing in order to prevent clogging of the nozzles.

8. Claim 131 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto '836 as applied to claim 121 above and further in view of Osaka '840.

'836 does not teach Applicant's specifically claimed ranges of the grain size, specific surface area, or paste viscosity.

'840 teaches that the particle size and viscosity of phosphor pastes are known to affect the light-emitting characteristics and resolution (col. 3, lines 8-39 and Abstract). The size distribution necessarily affects the specific surface area. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the size distribution, specific surface area and paste viscosity of '553 for the best light-emitting characteristics and resolution.

9. Claims 134-138 and 152-153 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto '836 as applied to claim 121 above and further in view of Koike et al. (U.S. Patent 5,767,876, hereafter '876).

'836 is discussed above. It further teaches that multiple applicators may be provided to apply the phosphors in series (Fig. 13) but does not explicitly teach the use of two paste applicators that are moved relative to the same table simultaneously.

However, '876 teaches that when depositing multiple colors from ink nozzles in patterns such as stripes (see, e.g., Fig. 46), each color ink may be deposited from adjacent rows of nozzles in a unified collection of applicators (col. 11, lines 40-56; Fig. 1). Thus, discharging may be simultaneous, and the rows travel at the same speed. Taking the references as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used multiple applicators to distribute the multiple phosphors simultaneously in order to reduce the processing times. In such an embodiment, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have three staggered sets of nozzles, each set

Art Unit: 1762

with its own distribution system to supply different colored phosphors in order to reduce the processing time by applying all the stripes simultaneously.

Claim 138: Each row of nozzles is perpendicular to the scanning direction (col. 11, lines 51-55), and therefore they are parallel to one another.

10. Claim 139 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto '836 in view of Koike '876, as applied to claim 138 above, and further in view of Silverbrook (WO 96/32281, hereafter '281).

'836 and '876 are discussed above, but they do not explicitly teach a distance between rows of greater than 600 microns. '281 teaches that a separation of approximately 1 mm (1000 microns) is a suitable compromise of compactness and separation to more conveniently provide the different colors without mixing (pp. 54-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a spacing of about 1 mm as the particular spacing between nozzle rows of different colors with a reasonable expectation of success because '281 teaches that such is a suitable distance to have allowed convenient construction with relative compactness.

11. Claim 140 is rejected under 35 U.S.C. 103(a) as being unpatentable over '836 as applied to claim 121 above, and further in view of Kohli et al. (U.S. Patent 5,741,746, hereafter '746).

'836 is discussed above, but does not explicitly teach that the PDP is made by joining the phosphor substrate with a rear substrate having a plurality of electrodes and injecting a rare gas between the substrates. However, the Examiner takes Official Notice that such is an extremely well known method of preparing PDP devices from the phosphor screens. See, e.g., '746, col. 2, lines 46-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have joined the substrate of '836 to another with a plurality of electrodes and filled the intervening space with gas because such is the conventional method of assembling PDPs.

Art Unit: 1762

12. Claims 144-145 are rejected under 35 U.S.C. 103(a) as being unpatentable over '836 as applied to claim 141 above, and further in view of Silverbrook (U.S. Patent 5,850,241, hereafter '241).

'836 teaches the limitations of claim 92, but does not teach that the nozzle is coated with a fluorine-based resin or amorphous carbon film. '241 teaches that ink-jet nozzles may be coated with hydrophobic films such as an amorphous carbon film (col. 38, line 66-col. 39, line 30) to prevent reaction between the nozzle and polar solvent-based inks. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a hydrophobically coated nozzle in order to deposit the paste of '836 when the desired paste uses a polar solvent as a vehicle to prevent interactions between the paste and the nozzle. '241 teaches amorphous carbon and fluorinated diamond films. The Examiner takes official notice that fluororesins are notoriously well-known hydrophobic coatings. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a fluorinated resin as the hydrophobic coating material with the expectation of similar results.

Response to Arguments

13. Applicant's arguments filed 10/27/2005 have been fully considered but they are not persuasive.

The rejection of claim 130 under 35 USC 112, 1st paragraph is withdrawn in view of Applicant's citation of support on p. 70. (See also p. 74.) Applicant argues that the specification supports the limitation of claim 147 of a "detector for detecting the bottom surface of the flat plate" because it teaches detecting means for locating the positions of the outlet holes and the outlet holes are located in the flat plate. The argument is unconvincing because there is no disclosure that clearly recognizes that the position of the flat plate is calculated based on the determination of the location of the outlet holes, because the outlet holes are not necessarily in the flat plate (See Fig. 6), and particularly because claim 147 recites "a first detector for detecting position of at least one of the outlet holes" which is separately recited from the (fourth) "detector for detecting the bottom surface of the flat plate". There is therefore particularly no disclosure which suggests a mechanism having separate detectors for the outlet holes and the flat plate, which is clearly embraced by the claim. Applicant argues that the specification supports the limitation of "an adjuster to adjust an inclination degree of the bottom surface of the flat

Art Unit: 1762

plate” because it teaches a mechanism to adjust the inclination degree of the paste applicator and the flat plate terminates the paste applicator. The argument is unconvincing because a paste applicator could be constructed such that while the angle of the applicator as a whole was adjusted, the nozzle termination surface (i.e., the flat plate) could be counter-adjusted such that the angle of the flat plate remains unchanged. Thus, Applicant would have support for a limitation to an adjuster for the angle of the paste applicator but does not have support for a limitation to an adjuster to the angle of the flat plate.

The rejections under 35 USC 112, 2nd paragraph are withdrawn in view of Applicant’s amendments.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Nanto clearly indicates that the selection of 5-30 outlet holes is merely exemplary (col. 4, line 35). Applicant argues that the disclosure of Nanto’s multipass method is an indicator that a multipass method was the best method to form a plasma display panel. *Mueller Brass Co. v. Reading Industries* (176 USPQ 361, p. 369) states that in judging the level of ordinary skill in the art, it is the level of those who normally attack the problems of the art that counts; persons who do most of the problem solving in involved art are graduate engineers; as such they are chargeable with general knowledge concerning principles of engineering outside the narrow field involved and with the skills, ingenuity, and competence of the average professional engineer. It is the Examiner’s position that the selection of the number of holes would have been a design decision made based on balancing features such as increased speed of coating to the desired thickness (with a greater number of holes) and decreased capital and maintenance costs (with a lesser number of holes). It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 124 USPQ 378 (CCPA 1960). Applicant’s only asserted advantage for the use of more nozzles in the original

Art Unit: 1762

specification is that more nozzles would lead to decreased process time (p. 38). This result is not unexpected. Even within the range disclosed by Nanto (5-30 nozzles), it is clear that the use of 30 nozzles would require 1/6 as many passes as the use of 5 nozzles, and therefore would have reduced process time. The analogy to higher number of nozzles would not have eluded one of ordinary skill in the art.

Applicant argues that Nanto teaches of a difficulty in precise control using plural nozzles at col. 12, lines 30-39. The argument is unconvincing because Nanto solves this problem by providing angled deposition. Applicant embraces this very same solution (see, e.g., claim 148). The argument is further unconvincing because precise control is not claimed.

Applicant apparently argues on p. 20 that Applicant has recognized that the use of nozzles in a flat plate is superior to the use of needle-like nozzles. The argument is unconvincing because the recitation of a flat plate does not distinguish the use of nozzles flush with the flat plate (as in Applicant's Fig. 5 and Nanto's Figs. 20-22) from the use of needle-like nozzles (as in Applicant's Fig. 6 or Nanto's Fig. 15 and 16). To the extent that Applicant appears to be arguing that the use of nozzles flush with the flat plate produce superior results, the argument is unconvincing because it is contradicted by the original specification, on p. 60, first full paragraph, which indicates that the needle-like arrangement of Fig. 6 is preferable to the use of holes flush with the flat plate of Fig. 5.

Applicant's arguments regarding the declared facts are unconvincing for the reasons recited below:

The declaration under 37 CFR 1.132 filed 10/27/2005 is insufficient to overcome the rejection of claims 121-153 based upon Nanto with other references as set forth in the last Office action because:

Declarant's statement that the use of more than 30 nozzles was difficult is unsupported by a showing of evidence that indicates the particular conditions under which such coating was asserted to be difficult. Furthermore, there is no evidence that such knowledge was available in the art at the time of filing the current application, and therefore it is not probative of what was known in the art as of the application date.

Declarant performs experiments (Experiments 1 and 2) to contrast the use of 32 needles with the use of 64 outlet holes. The experiments are not commensurate in scope with the claims

Art Unit: 1762

because they are not within the claimed range of the number of outlet holes. Furthermore, the claims are not limited to the particular materials, geometry, speed, and pressures used in the experiments. Applicant argues that the difference between Experiments 1 and 2 demonstrates that superior thickness distribution is obtained by using more nozzles. The showing is not sufficient to demonstrate that the number of nozzles is responsible for the changed results because Applicant uses vastly different pressures for the two examples. Furthermore, the showing is contradicted by the specification as originally filed in which the results for Example 1 (64 holes) and Example 4 (640 holes) obtain identical results in both ease of coating and thickness distribution as shown in Table 1 on p. 77.

Declarant performs experiments (Experiments 3 and 4) to contrast the use of 64 holes and 640 holes. The declaration is not convincing because Declarant has not provided sufficient detail to evaluate the scientific approach. However, it appears that only one experiment for each number of outlet holes was performed, and the claims are not limited to the particular materials, geometry, speed, and pressures used in the experiments. Declarant argues that the experiments demonstrate that sectional coating differs in appearance from single-pass coating. The argument is unconvincing because Applicant performed related experiments (Example 1 and 4 of the original application) and did not note any difference in appearance. Therefore, it does not appear that Applicant had possession of any knowledge that sectional coating differs in appearance from single-pass coating at the time of filing of the application. Also, these experiments are not commensurate in scope with the claims which do not require single-pass as opposed to multipass construction.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


Art Unit: 1762

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Monday-Thursday, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael Cleveland
Primary Examiner
Art Unit 1762

4/19/2005